Assessing Attitudes of Minnesota Deer Hunters for Regulatory Change – Comparison Between Randomly Selected and Self-Selected Respondents

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• My name is Lou and I work for a state wildlife agency
• I understand:
  – Probability-based sampling
  – Confidence intervals
  – The differences between random surveys and opinion polls
  – There is the potential for huge problems with internet data
• None of that really matters when Leadership says do something and the public doesn’t understand the last 4 bullets.
• This presentation is one manager’s attempt at balancing several data types with decision-making.
• My PhD advisor (who shall remain nameless) cautioned me not to do this ...
Management Conundrum

- Decisions affect traditional patterns of people who don’t like change.
- Decisions are influenced by:
  - Budgets
  - Time
  - Legislative ‘meddling’
  - Appearance of inclusion of ‘all stakeholders’
- Lack of understanding of the scientific method.
- Is no data better than bad data?
- Can we manage what has historically been considered bad?
Background

• Started looking at alternative regulations in 2005 as a way to manage deer densities and provide more mature bucks in the deer population.
  – Early Antlerless Season (EA)
  – Earn-A-Buck (EAB)
  – Antler Point Restrictions (APR)
• Learned that EA was popular but not very effective, EAB was very effective but long-term not as popular, and APR was both effective and popular over time.
• Previous research revealed APR was a reasonable split between population management and buck management.
• Comparatively high levels of interest for mature buck management in southeast Minnesota.
Issue

- High deer and hunter densities
- Majority private land
- Interest in ‘mature buck’ management
- Robust dataset
Current Season Structure

• 7-day early season (3A) followed by 9-day late season (3B).
• Mutually exclusive groups (can’t hunt both seasons).
• No restriction on the type of buck that could be taken
• Cross-tagging: Minnesota allows hunters to take deer for each other.
• Can take up to 5 deer throughout most of the area.
Data Collection

- Self-Administered mail back questionnaires (stratified random):
  - 2005 (n = 820)
  - 2009 (n = 1,600)

- Public Input Meetings (n = 6)
  - March 2010
  - Advertised through radio, newspaper, DNR releases
  - Been doing these for decades
  - 2009 (N = 263)

- Internet presentation and survey
  - Opened during March 2010
  - Same advertising as meetings
  - 2009 (N = 730)
Random Survey Data

<table>
<thead>
<tr>
<th>Year</th>
<th>n</th>
<th>Adjusted Response</th>
<th>Years Experience</th>
<th>% Private Land</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>820</td>
<td>59%</td>
<td>23</td>
<td>80%</td>
</tr>
<tr>
<td>2009</td>
<td>1,600</td>
<td>60%</td>
<td>24</td>
<td>90%</td>
</tr>
</tbody>
</table>

Other 2005 vs. 2009 comparisons:
- Eliminate buck cross-tagging - 48% vs. 50%
- Support APR – 51% vs. 47%
- Delay the deer season – 34% vs. 31%
The survey gave hunters a choice between several regulations, including the option of not hunting. In all cases, hunters were most likely to choose the antler point restriction over other options. Very few indicated they would not hunt the area if regulations were changed.
APR Hunt Participant Surveys

χ² = 12.2, P = 0.02

χ² = 9.6, P = 0.048

χ² = 6.31, P = 0.61

Support
Satisfaction
Participation

Percent

2005 2006 2007
2010 Proposed Changes

1. Ban cross-tagging of bucks during all seasons.
2. Implement a 4-point (to one side) antler point restriction regulation throughout the southeast.
3. Lengthen the 3A season to 9 days as a component of the antler point restriction regulation.
The Public Input Piece ...

- Good data vs. no data when no data isn’t an option.
- DNR has long history of roundtable-style public input meetings. Thus, there is public expectation.
- This is my attempt at structuring the public meetings and broadening the ‘dataset’ by including individuals who did not attend a public meeting but still want to be heard.
- Completely and totally recognize this is not random data; however, please refer to disclaimer slide.
Non-Random Data Collection

Public Input Meetings
- Moved away from roundtable-style gatherings.
- Structured as more of a lecture with presentation and Q&A period.
- Lasted about 2 hours, participants answered identical questions as 2009 survey.
- Some risk involved with Q&A period.

Internet
- Participants were pointed to a website.
- Required to view roughly the same presentation.
- Could then complete the same survey.
- Collected IP address, date/time stamp to screen possible duplicates.
2010 Zone 3 Deer Season Recommendations
2010 Hunting Seasons Public Input

2. Deer Hunting Participation

1. Did you hunt deer during the 2009 season?
   - Yes
   - No

2. Please indicate which 3-digit deer permit area you hunted most during the 2009 deer season.

3. Please check which seasons you hunted during the 2009 season (check all that apply).
   - Archery
   - Firearm
   - Muzzleloader

4. Including 2009, how many years have you been hunting deer?
## Demographics

<table>
<thead>
<tr>
<th>Survey</th>
<th>n</th>
<th>Adjusted Response</th>
<th>Years Hunting</th>
<th>% Hunted</th>
<th>% Archery</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005 mail</td>
<td>820</td>
<td>59%</td>
<td>23</td>
<td>99%</td>
<td>-</td>
</tr>
<tr>
<td>2009 mail</td>
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<td>60%</td>
<td>24</td>
<td>98%</td>
<td>24%</td>
</tr>
<tr>
<td>Public Meetings</td>
<td>263</td>
<td>-</td>
<td>32</td>
<td>99%</td>
<td>63%</td>
</tr>
<tr>
<td>Internet</td>
<td>730</td>
<td>-</td>
<td>26</td>
<td>99%</td>
<td>62%</td>
</tr>
</tbody>
</table>
Response by Survey Method

- **Cross-tagging APR Season**: 56, 69, 65
- **APR**: 55, 68, 63
- **Season length**: 51, 43, 39

- Random
- Public
- Internet
Conclusions

- Online and random respondents were of similar experience, public meeting attendees were older.
- Archers were over-represented in the online and public meeting samples.
- Non-random individuals were generally more supportive of the proposals than random respondents.
- Longer deer season generally wasn’t supported by any group.
Conclusions

• Not naïve to the ‘slippery slope’ issue of non-random data and decision-making.
• As public becomes more vocal and involved, they will insist on getting their voices heard.
• Won’t survive if the mindset is random or nothing.
• Agencies must develop a way to structure non-random data in a manner that is meaningful.
• A good demographic dataset is invaluable for comparison purposes.
• Can we make demographic adjustments if data are available.
2010 Deer Season

- I recommended we adopt the buck cross-tagging ban, APR, but not the season length extension.
- Commissioner adopted buck cross-tagging, APR, and season length extension.
- Insider baseball:
  - Commissioner was most interested in public meetings and what the organized deer groups were saying.
  - Was reticent to not do longer season if we did APR.